



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Denise L. Faustman

Serial No.: 09/913,664

Filed: August 17, 2001

Entitled: METHOD FOR INHIBITING  
TRANSPLANT REJECTION

ART UNIT: 1651

EXAMINER: V. Afremova

Atty. Docket No.: DLF-002.1P US

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**Affidavit under 37 CFR §1.132**

In conjunction with examination of the above-identified U.S. patent application, the undersigned declarant, Denise L. Faustman, M.D., Ph.D., hereby declares and states that:

1. I am the same Denise L. Faustman named as the inventor in the above-identified U.S. patent application.
2. I have read the Office Action dated January 13, 2005 issued in the above-identified U.S. patent application and have reviewed the references cited in the Office Action. One of those cited references is an issued United States patent, U.S. Pat. No. 6,617,171, entitled Methods for Diagnosing and Treating Autoimmune Disease, based on an application filed February 27, 1998, naming as inventors Denise L. Faustman and Takuma Hayashi.
3. In the Office Action, the Examiner relies on U.S. Pat. No. 6,617,171 as follows:

"Furthermore, US 6,617,171 also teaches the method of treating tissues to render them suitable for transplant by incubating with enzymes capable of cleaving MHC class I antigens. The useful enzymes capable to remove MHC class I include endoproteinase, pepsin, papain, chymotrypsin, trypsin, collagenase, etc. with papain being particularly of use (col. 37, lines 52-65 and col. 38, lines 53-65)." [Office Action of Jan. 13, 2005, page 5, para. 1.]

4. The specific passages of U.S. Pat. No. 6,617,171 cited by the Examiner read as follows:

"The method of treating tissues to render them suitable for transplant comprises incubating the donor tissue with an enzyme capable of cleaving MHC Class I antigens, e.g., in an amount and for a sufficient period to remove sufficient MHC Class I antigens to significantly attenuate the host's immune response to the donor tissue. Such incubation is performed in a medium which allows both enzymatic cleavage of the surface antigens to proceed, but is still amenable to tissue survival (e.g. a physiological salt buffer, such as PBS, or a cell-, tissue- or organ culture medium, such as are known in the art[]). Typically the mean cell density of Class I antigens will be reduced below about 10% of untreated levels, preferably below 1%. One such useful enzyme is papain." [U.S. Pat. No. 6,617,171, col. 37, lines 52-65.]

\* \* \*

"Useful enzymes include proteolytic enzymes, glycosidases [sic, sp.], proteinases and combinations of such enzymes that may sufficiently alter the surface antigens to inhibit subsequent transplant rejection. Examples include, but are not limited to, endoproteinase, pepsin, papain, chymotrypsin, trypsin, collagenase, cyanogen bromide, enterokinase (Asp or Glu-specific), iodosobenzoate, lysobacter endoproteinase, N-bromosuccinimide, N-chlorosuccinimide, hydroxylamine, 2-nitro-5-thiocyanobenzoate and endopeptidase. Papain [is] particularly of use, as it is known to cut all MHC Class I molecules of different alleles and different species in the  $\alpha 3$  domain. Papain does not cut the  $\alpha 1$  or  $\alpha 2$  domain." [U.S. Pat. No. 6,617,171, col. 38, lines 53-65.]

5. I hereby declare that I am the same Denise L. Faustman named as co-inventor on U.S. Pat. No. 6,617,171. Furthermore, I declare that the paragraphs quoted above from U.S. Pat. No. 6,617,171 and the surrounding text describing methods of inhibiting transplant rejection are descriptions of my own work.
6. I also declare that the co-inventor on U.S. Pat. No. 6,617,171, i.e., Takuma Hayashi, is not a co-inventor of the subject matter relating to methods for inhibiting transplant rejection described in the portions of that patent referred to above and relied on by the Examiner in the Office Action of January 13, 2005.

7. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that this declaration is made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the above-identified application(s) or any patent(s) issued thereon.

Denise L. Faustman MD, Ph.D.  
Denise L. Faustman, M.D., Ph.D.

July 1, 2005  
date